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Competition within the Finnish games industry

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Abstract — Competition is commonly understood as a process where the market shares are reallocated from the less efficient firms towards the more efficient ones. Within the evolutionary framework it is also emphasized that innovation is an important competitive weapon that will allow the firm to escape fierce price competition. The findings from the Finnish games industry suggest that efficiency and market shares are not an insightful way to analyze competition as the size of the market is not constant even in the short run, the products are far from being perfect substitutes and, as it is a case of steep increasing returns, the efficiency in game development is not of prime importance. Also, additional consideration should be given to the competition over resources and the way in which competition both encourages and restricts innovation.

Keywords — Competition, evolutionary theories, selection, specialization, games industry

I. INTRODUCTION

A. Background

The topic of this paper has emerged during a case study on the development mechanisms of the Finnish games industry. Here the games industry is defined to comprise firms that engage in game development and/or publishing for various platforms, such as consoles, PCs, mobile phones or online. For the case study the representatives (CEO, CFO or equivalent) of eight Finnish firms have been interviewed.

The phenomenon under interest is competition within the games industry from the viewpoint of the Finnish firms. As the representatives of several firms were interviewed a paradox emerged. The interviewees usually stated that they do not have direct competitors. However, they all talked about competition or competitors during the interview.

This phenomenon is approached with the evolutionary paradigm, since it allows the examination of competition in the form of selection. This means that competition is not seen merely as a relationship between two firms, but selection pressure is induced by many actors and features of the market in question.

B. Objectives

The objective of the paper is to analyze the paradox mentioned above. This means finding the factors that induce selection pressure over a firm.

The research question is the following:

What kinds of selection mechanisms operate within the Finnish games industry?

This is operationalised with the following research questions:

How do the firms compete?

How is succeeding in that competition determined?

How does the market limit the performance of a firm?

The aim is to find out which factors limit the payoff from possibilities or opportunities that the firms face. This analysis is not limited merely to direct competition between two firms and resulting market shares. The aim is also to describe the mechanisms that encourage or force the firms to specialize, to choose where to invest and how to form competitive advantage. Fundamentally, it is a question of what do the firms have to do in order to avoid bankruptcy or in order to enhance profitability. Thus, it is about how the firms choose the battles to partake in and what kinds of rules govern succeeding in such battles.

II. COMPETITION IN EVOLUTIONARY THEORIES

A. Competition as a mechanism of economic change

The development of such a knowledge-intensive industry is regarded as an evolutionary process in this research. An evolutionary process constitutes of variation within the characteristics of a population, selection that winnows down the variation and mechanisms that renew the variation. In this research the firms within the industry constitute such a population. They are different from each other in many aspects thus making up the intra-industry variation. As the firms compete, the market functions as a selection mechanism whereby the profitable firms survive. On the other hand, new firms are born and new products, services and production methods are created. Thus, the variation is replenished continuously.

The evolutionary view on the development of an industry emphasizes the impact of competition in determining the direction and pace of change. However, within a knowledge-intensive industry competition tends to be more subtle. Defining competitors may be hard and the result may vary according to the viewpoint taken at a given time. This is because the firms are usually highly specialized. In addition to market processes the firms base their decisions on information and knowledge that they can acquire from their environment. This means that it is not necessarily failure in the selection process that forces them to search for something new, but new directions are taken in order to avoid competitive selection by specializing and thus creating further variation.

Within the evolutionary theory variation and selection are regarded as two complementing forces. The interplay of these forces is the fundamental interest in the study of

evolution in different contexts. “The focus of attention is on variable or set of them that is changing over time and the theoretical quest is for an understanding of the dynamic process behind the observed change; ---. The theory proposes that the variable or system in question is subject to somewhat random variation or perturbation, and also that there are mechanisms that systematically winnow on that variation.” [1]

In an economic context such selection operates in the form of market competition. Nelson and Winter [2] state that their evolutionary theory of economic change emphasizes “the tendency of the most profitable firms to drive the less profitable ones out of business”. Thus the main selection mechanism is the market that determines the profitability of each firm which in turn translates into higher survival rates for more profitable firms.

Within an industry the firms compete based on the similarity of their products. High degree of similarity leads to intense competition whereas lower degree to a lower intensity of competition. However, the intensity of competition is not necessarily zero between two products although they would have a very low degree of similarity. [3]

Competition within an industry lowers the existing variation as some firms, products or production mechanisms are taken out of the system as losers of the competition [4]. This is quite a paradox as the fundamental prerequisite of selection is pre-existing variation. “Processes of competitive selection necessarily destroy (or rather absorb) the very variety on which evolution depends.” [5]

However, variation is replenished as new firms are born and the existing firms innovate. As selection winnows existing variation the entrepreneurs and firms have the motivation to replenish it as there is room in the market for new things. This is a reciprocal cycle where innovation drives competition and competition drives innovation [6]. This process has been named “creative destruction” by Schumpeter and according to him what matters is “competition from the new commodity, the new technology, the new source of supply, the new type of organization”. [7]

B. Definition of competition

Dictionary definition of competition is “a rivalry between individuals (or groups or nations), and it arises whenever two or more parties strive for something that all cannot obtain”. (Stigler 1987 in [7]) Within the economic domain there are two notions of competition, namely competition as a state of rest and competition as a process (see e.g. [7] or [8]). Competition as a state of rest is the predominant interpretation in economics and relates to the notions of perfect competition and equilibrium. However, what is more interesting is competition as a process. Metcalfe describes the process of competition as follows: “competition is a succession of events, a dynamic process, a voyage of exploration into the unknown in which successively superior products and production methods are introduced, and consumers discover who meets their

particular needs and how. Neither producers nor consumers know in advance the outcome of the competitive process, for that can only be established by trial and error.” [9]

When we talk about competition we often refer to efficiency as the outcome. This means that competition is a process whereby the market shares within the industry are reallocated from the less efficient firms to the more efficient ones. This results from the reduction of profits of the less efficient firms which reduces their market shares. [8] Hözl [8] states that: “The market shares define the structure of the industry and changes in market shares are the ultimate measure of evolutionary competition.” [8] However, also many other variables, such as concentration, pure profits, price cost margins and revenue, have been used to measure competition [8].

According to Vickers [7] there are several indicators of having “more competition” that have been used commonly. The list includes 1) greater freedom of rivals following from, for example, removing barriers to trade, 2) greater number of rivals, 3) breaking up of a cartel and 4) increase of the reward for succeeding in the competition. Basically all these origin from the openness of the system and incentives to do well.

Competition as a selection process (also called “Darwinism”) in the economic domain is used with two meanings. It is either seen as a metaphor and a way to describe the competitive struggle or as an analogy meaning that economic selection is in fact very similar to natural selection in the biological domain. [10] In both cases it is understood that: “some firms survive and some die, depending on the pay-offs associated with a particular strategy. If the selection pressure is high enough only the most efficient survive. The surviving firms therefore act efficiently, even if the strategy choice is not entirely deliberate.” [10] However, the criticism of this line of thinking is that the logic is tautological; the surviving firms are efficient because only the efficient firms can survive. [10] On the other hand, it is not just about the survival of the efficient but about growth associated with profitability. “For selection to be operative, the market’s signals of profit and loss must correspond to “selective advantage”; that is, the group of profitable firms must, as an aggregate, have a higher growth rate than the group of unprofitable ones.” [11]

So far we have talked about competition in the output market. However, there is competition also in the resource side of the firms. As Metcalfe puts it: “competing to sell the product and competing to acquire the inputs are the two principal forms of economic interaction.” [9] “Firms are competing with each other, at the most basic level, through emulation, variation and substitution of each other’s resources. It is the competitive struggle over resources that may be viewed as the fundamental driving force of the capitalist economy.” [12]

As the employees are the most important resource to a firm within a knowledge-intensive industry it is also important to note managerial selection. This means that a firm evolves through the managers selecting teams and

people to perform certain tasks. However, as Knudsen [10] points out, managerial selection can be done based on many reasons. Within the competitive selection of firms the reason is the economic result and as a contrast it is not always the primary concern when managers select some teams over others. "In sum, we have an evolution of teams within firms by managerial selection and an evolution of firms in markets by competitive selection. The former process is nested within the latter, and evolution refers to the replication of the routines of the sort of team that is well liked by managers. Success, also in this case, refers to the literal addition or expansion of teams through replication of existing ones." [10]

The concept of managerial selection refers to managers deciding on the growth or decline of teams. Basically the manager tries to steer the firm to a direction that he perceives the market would favor. This would mean allocating larger budgets to teams with a better fit with market demands and better competitive edge. This is, however, not the whole story on what happens in firms. Teams that do not respond well to market demand are not simply victims of cost-cutting procedures but they are ordered or encouraged to change what they do and how they do it to be more competitive.

C. Succeeding in competition

There is no absolute measure of being competitive as such success is always determined by interacting with a population. Even though economic fitness is measured by expansion or decline rates of business units, it is not solely determined by the capabilities and intention of that unit. "However, the crucial property of economic fitness is that it is not a property of the business unit alone, but arises from the interaction between rival business units in a given market environment. It is inherently a feature arising from membership of that particular population." [9] Thus, if no firm does things too well in the scale of what is possible, a firm can succeed even with mediocre performance. What is good performance is relative and this brings us to the traditional indicator of success, namely efficiency.

In terms of efficiency, what is usually assumed is that "a firm with lower relative costs will enjoy a higher market share and a higher price cost margin, and hence, *ceteris paribus*, higher profits than its rivals." [13] This means that the managers would have an incentive to try to get the costs down and this would be the main source of competitive advantage. However, this is not the whole story, as Vickers [7] states. Besides avoiding sloth and slack to succeed in competition firms also innovate to achieve better productive efficiency. With a more passive view of the firms, competition simply causes efficient organizations to grow which results in higher mean efficiency within the industry.

What is missed in discussion on efficiency is that firms innovate not just to be more efficient but to produce different kinds of products. Thus, as Schumpeter pointed out, competition comes also from new products. As Hölzl [8] puts it: "Innovation is a central competitive weapon for firms." This means that firms specialize in order to avoid

fierce price competition. This means that even though in analytical frameworks innovation and competition, or creation of variation and selection on variation, are separate processes, it is not easy to make the distinction in practice. Innovation is a competitive move as competition is also an incentive and a source of inspiration for innovation.

III. CASE STUDY FINDINGS

The case study on the Finnish games industry has been conducted by interviewing the representatives (CEO, CFO or equivalent) of eight game firms. In table 1 the basic information of the firms and a brief statement of their thoughts on competition are given. The first sub-chapter analyses competition and selection among game titles and the second one discusses that among game developer firms.

TABLE 1
SUMMARY OF CASE STUDY FINDINGS

Firm	Founded	Employees	Platform	Subcontractor	Developer	Publisher	View on competition
Alpha	2004	35	Mobile		X	X	Against low quality developers
Beta	2002	27	Mobile	X	X		Sets upper limit on price
Gamma	2000	24	Mobile		X	X	Group effort against international big companies
Delta	1999	100	Mobile		X	X	Neck to neck with international heavy league players
Epsilon	2000	170	Online, mobile, handheld, console		X	X	We do our thing and we are not that interested in what others do
Zeta	2002	9	PC, online	X	X		Imposed by international publishers
Eta	1995	25	Console, PC		X		It is about owning a segment that is large enough
Theta	1995	13	Console, PC		X		International publishers are very picky

A. Competition among game titles

We will start the conceptualization of competition within the Finnish games industry by analyzing selection that operates on game titles. Thus, firstly we are interested in product market competition. Naturally, the selection that operates on the game titles makes up the selection operating on the firms, but we shall return to that in the next sub-chapter.

Selection on game titles constitutes of three rounds. The first is the phase in which potential game ideas and concepts compete with each other within a game developer firm. Only a fraction of game ideas is developed to the stage where they can be sold to game publishers. The

second round is that of game concepts competing for publishing deals. Also here only a fraction will survive. The third round is selection enforced by the consumer market. As most games are financial disasters, the bulk of the published game titles will make losses and only a small number will end up as hits with huge sales. This is presented in figure 1.

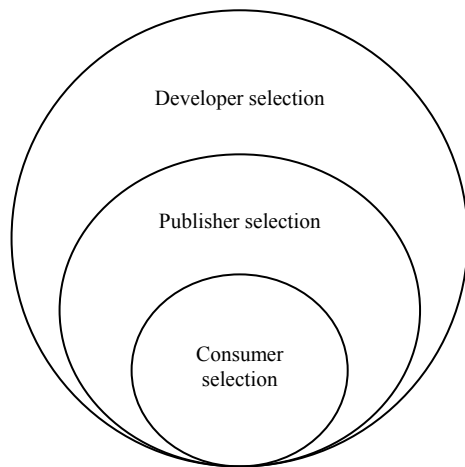


Figure 1. The three rounds of selection on the game titles.

The criteria for game concept selection within the developer firms are often described as more of an art than a science. The interviewees used words like feeling, excitement, intuition and consensus to describe the decision process. This is well described in the following quote.

"We do not have any scientific method or a scoring system. Somehow consensus arises if consensus is required. The founders are more equal than the others. We have developed also ideas put forth by others. And if the team gets excited then start doing it." (Theta)

However, even though such soft things would be important in making the decision, it is usually backed up by sound business logic. As the following quote suggests, decisions to reject are also based on low market potential and technical problems, and those overrun any greatness that the content would have.

"A small developer like us has to operate more based on intuition and feeling on where this world is heading to. In our system each game has a decision life cycle. Once a week every Tuesday we sit down and go through each project. We have killed projects if we have felt that even though the idea has been good but for some reason these kinds of games do not sell at the moment or that the developer cannot do it or there are technical problems for which the game will not run properly. So we have killed quite many projects after starting them and even after we have spent money on them. There is no sense in doing a game if you don't believe that there is business. That is a raw fact. If you don't believe that it will bring you money then it dies no matter how a great piece of art it is." (Gamma)

Another reason for discarding a potential game project is the budget. This happens especially in firms that have more

of a subcontractor status. Also following from such a status is that the contracts may limit the scope of projects that can be undertaken in the near future.

"In some instances we know what the budget is and that it is just not going to fit in it. For example a three-dimensional car game cannot be done with just some euros. It costs more than a two-dimensional game. Then there are legal matters. If we do a top-view car game for some customer then after six months we cannot do the same thing for another customer because of the contract. In such a case the first customer would pay for the learning and we would use that in the second project." (Beta)

What is also a very important factor in making the decision to start developing a game concept is competition from established brands in a given genre of games.

"At the moment we have more than one hundred game concepts and we have seven games and we a roadmap for four months. About 90 percent of the ideas are discarded. Usually the reason is that the business potential within our key markets is not sufficient. It's nice to do an ice hockey game but ice hockey is not even continentally very appealing and another matter is that there is one huge competitor Electronic Arts that is now very strong in sports games. Many game designers would like to do games for themselves but this is a business. If someone likes to play a niche role playing game then that's fine but we have to go with what is the market potential. And that is the most important reason for discarding an idea." (Alpha)

"The typical reason is that if there is a lot of competition. If there are big competitors then it will not pay off to do it. For example it is not a good idea to do a football game because there are big licenses and brands like EA Fifa 2006 against which it is quite impossible to compete. And if you think that the idea does not have mass market appeal but it is a niche concept and we are trying to reach the global market. One typical case is ski jump game which we have but no-one wants to hear of it in the US or in England." (Delta)

It seems to be quite a paradox to come up with an idea that would be internationally appealing to the masses but not yet implemented by anyone. The solution is to do something different and compete by innovating but that strategy has its problems as well.

Interviewer: Do you try to avoid such predefined genres?

Interviewee: Actually yes, but it feels like the slightest innovative twist that we offer seems to be too much, unfortunately. We have tried some new approaches lately so that the high concepts would not be totally alienating." (Theta)

This means that in order for a game concept to get a chance at the developer it should be different from the existing ones, but not too different to appear strange for the potential publisher and finally to the consumers. And all this should fit within the budget and be technologically feasible.

As a game concept has been selected by the developer to be developed further a demo is made. Then this demo is

presented to the publisher, in order to get financing for the rest of the project and to make a deal on the mechanisms to share potential profits. Usually the developer get all the money needed to finish the game and perhaps even some profit margin is included. In addition to this the publisher will pay royalties based on sales, but only after the publisher has made enough money to cover the investment in game development. As publishers loose money on most game titles, such royalties are only paid in case of a big hit. But in order to get to that stage the developer has the pressure to make a deal with a publisher for the game title.

"You go with the package to the publisher and if the developer has been able to finance the project that far that they have some material to present to the publisher, then that is where it usually ends. Like you can show the idea and how it runs on a screen and you have one minute of the game done. Then they say yes or no. At that point the publisher comes to finance the project. In some cases the developer can develop the game further but risks rise all the time. Even if you have a completed game it is possible that no-one wants to publish it." (Theta)

As the publishers carry most of the financial risks and there is a smaller number of them than there are developers, they have a strong position in selecting which games will get the deal. This means that there are many demos presented by different developers to choose from. This gives the publishers an edge in demanding certain things in development contracts.

"Usually the first draft is the worst possible like you have to give up your daughter and sign the paper with blood. Our own experience is that there is some room for negotiation and you can get reasonable things. The project is scheduled with some milestones and the publisher pays as the milestone is completed. The developer has the pressure and they are hanging on the publisher who can have quite tight strings depending on the situation. And if we are talking about a console game then it is quite a large part of the income of the developer then the publisher can dictate the artistic direction and whatnot." (Theta)

This would mean that the selection environment for the developer firms would be very much directed by the publishers. However, this is not the entire story as good game concepts are in high demand. This means that a developer with a good track record may have several publishers to choose from.

"Before our first success it was very hard like it is for everyone. I wasn't there in that rumba but I have heard the war stories how hard it was. But it is not that hard now. You are as good as the last game you have sold. At the moment the situation for us is good and we want to hold on to that and that is done by doing good games. And also by doing everything professionally. That means keeping promises and in general doing things honorably. And leaving business partners with a good aftertaste. Firm reputation consists of so many things. There are the games but there is also the way in which you do business. Competition is tough and although some old firms die darwinistically all the time also new good firms re born

every year. You cannot rest at any point. It is very rough and the four or five large publishers only want to work with four or five external developers so you have to work hard to stay on that list once you get there." (Eta)

As the publishers have such power in deciding which game concepts are taken forward and which are not, there is some tension between the developers and publishers. A common criticism concerning the publishers' decision making logic is that they are willing to finance only such games that repeat things that have sold well in the past and would thus be to the liking of the mass market. This means that novelty would not be appreciated.

"Often people ask why there are only certain kinds of games and the reason is that publishers are public companies and they have to do interim reports. That means that a game has to sell a certain amount and in order to do that you have to avoid risk and please as many consumers as possible. Hardcore gamers dread such games and I don't know who buys those games because usually the critique is that games are always the same. So why are so many of those made? We would like to do different kinds of games." (Zeta)

Another criticism of the publisher actions is that they determine some games to poor sales by cutting their marketing budgets. However, even huge marketing efforts cannot turn a very bad game into a big hit. Thus, it is acknowledged that both good game quality and good marketing are necessary but not sufficient conditions for good sales.

"The success of a game is determined six months before it is published. It starts with how the publisher believes that the game will succeed. They make projections based on how these kinds of games have sold previously and that is the first problem if your game is of a new type. There is no evidence of good sales for its type and the publishers do not want to invest in marketing. And when there is no marketing then it becomes a self-fulfilling prophecy. Perhaps some types of games never get a chance. Big games that are advertised on the sides of buses and on TV have for some reason been believed in. So often success has been guaranteed with a previous success. However, there are games that despite huge marketing budgets have not succeeded. So there has to be both good game and good marketing." (Theta)

Within the mobile phone games the factor with most influence on selection induced by consumers is said to be deck placement. This means that games that get good placement in the operator deck are sold more than those with a less good placement.

"It is not really rocket science if you look at how the end user makes the decision to buy. In the end it is dependent on one thing; it is the deck placement when you go to Vodafone Live or T-Mobile operator portal. On average 90 percent of European consumers do not have flat rate but they pay time-based on browsing. He buys a game with good deck placement, such as top ten or game of the week or something. And to get a good deck placement for a new game you arrange a campaign with the operator and that is

why we put a lot of ammo to marketing and do co-marketing with operators. Of course quality helps but we do original IP that competes with Star Wars for example and no one has heard of our stuff so we really have to have higher quality than others.” (Alpha)

The fragmentation of the market means that there are no direct rivals in the sense that it would be either our game or their game that would get certain good deck placement. This also means that thinking of competition in terms of market shares is not very insightful.

However, deck placement only applies to mobile phone games. But for console games the market is just as dispersed. There are many genres and segments to which games are classified and in each genre there is competition.

”If we can own a mind share in the mind of the gamers like when you say movie-like action game then we hope that they think about our game. And that competes in the action adventure category. It owns a small segment and we hope that it is large enough to be financially sustainable. But in any other genre let’s say strategy games which is a large one then you have to have some innovations related to either technology or gameplay so that it differs from all the rest. If there is a genre with Coke and Pepsi and you try to bring in another cola drink then you are not likely to win that battle.” (Eta)

However, it is not just competition within a genre that is important. There is also competition between genres, and looked with a wider scope, there is also competition between games and different forms of entertainment.

The logic of the three selection rounds is that in this way the concepts that are likely to be unprofitable are selected out prior to reaching the consumer market. However, this is based on the assumption that the concepts that survive developer selection are actually of the kind that are appealing to the publishers and the ones surviving publisher selection are appealing to the consumers. Thus, the assumption is that the two first selection rounds would consistently winnow down variation to cover at least the area that will survive in the final selection round. However, there is no way of knowing whether the games that are developed and published at the moment cover any more than a fraction in the space of all possible games that the consumers would be willing to buy. This is presented in figure 2.

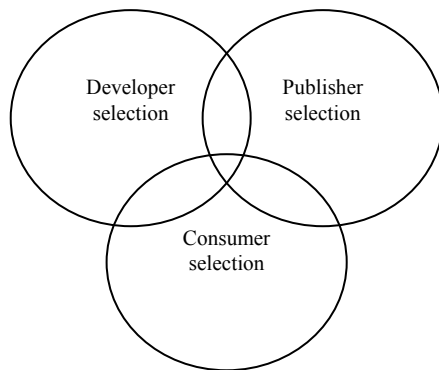


Figure 2. Three rounds of selection without the consistency assumption.

Based on this it is possible that there are game titles that the publisher would like that do not survive in the developer selection. Also, there may be game titles accepted by the developers that the publishers discard even though there would be substantial consumer appeal. But to conclude, it is quite certain that there are possible games that the consumers would buy but no-one has come with the original ideas for those yet. And this is also the reason novelty is created by developer firms and expected by publisher firms in order to find and make good use of such consumer potential.

B. Competition among developers

Game developer firms are usually small and young. This is because the industry is growing and new firms are founded. However, the other reason is that the industry is quite volatile and firms also die, which means that the number of old firms is small. The volatility of the industry can be explained by several factors. As such a firm is founded it requires many kinds of competence to make it run smoothly. Firstly, there is the technological competence that has to be up-to-date and developed continuously.

”I would say that what usually happens is that they also run out of competence in two ways. First is that they are not able to make the jump from console generation to the next when it become technologically more complicated. From PlayStation 1 to PlayStation 2 quite many developers died and now to PlayStation 3 many will die too.” (Eta)

Besides technological competence there has to be certain business competence relating to project management, contract negotiations and the overall strategy of the firm.

”Basically no matter what the business is it takes certain competence to set a firm up and it takes certain competence to handle the growth and if you don’t get the competence from outside and change your procedures you will die in that environment. Quite traditionally game developers have had a great game designer or a great programmer that has been ordered to be a project manager or CEO. Not surprisingly he has not been that interested in building the business processes or infrastructure. People have had a garage way to work and perhaps they have accidentally sold IPs or they have become a subcontracting company that will be the victim of cost-cutting and will eventually die. But behind it all is the lack of business competence.” (Eta)

But even such competences are not sufficient in guaranteeing the success of a developer. It is the nature of the industry that you have to make a bet on the game concept that you believe in. In many other industries that produce consumer goods the financial outcome of trying to sell a new product can range anywhere from zero to huge amounts and a moderate result is the most likely. For game developers the most likely outcome is zero, the less likely outcome being sufficient to cover the costs and the very unlikely outcome being a big success. A developer firm may be able to survive one zero outcome but not two. Thus, the selection environment for the developers is very harsh.

Surviving in such selection environment is challenging

and success factors include first and foremost the quality of the game. Also the track record of the firm is an important success factor. When there is history that shows that this firm is able and willing to do what they say that they will do, then they have good chances in succeeding.

"The product has to be in good trim. Then you have to have good reputation and brand. And it is very important that when you work with the same firms you have to be able to show that it has been profitable for both of you. Then you have to have resources to push the product and to do marketing campaigns." (Delta)

Competition between the developers is not as straight forward as the idea of market shares reallocated based on efficiency would suggest. Most of the interviewees stated that they do not have any direct rivals because the products are so different.

Interviewer: Do you have direct rivals?

Interviewee: No.

Interviewer: Why is that?

Interviewee: We sell orange juice and the others sell beer. These are different kinds of brands and we all compete over free time. Of course we have competitors but you can't say that we would compete with some other game. We compete with the Olympic Games on spare time. Like how people spend their spare time and excess money is what we compete on. I guess with other forms of passive entertainment like watching TV and surfing on the web. Like whatever that takes time. Nowadays people may play a couple of hours a night and we compete against anything else that could happen during the evening. And if we do a game for younger people then we compete over whatever they would do when they come home from school." (Eta)

The absence of direct rivalry is also a matter of variability of demand. If a hit game would not have been developed, published and finally bought by large number of customers, it would not mean that they would have bought some other game instead. Perhaps a part of them would have and a part would not. And as the criteria for choosing a game vary from consumer to consumer the consumers buying a game instead of the hit game would have ended up with different substitutes. However, within the mobile game market direct rivalry is detected in the form of competition on the deck placement.

"Of course there is direct rivalry because in Europe there are about 700 mobile developers and if there is an operator that publishes ten games a month then there is quite a hustle and bustle. At the moment the industry is developing so that foremost competition is against firms developing bad quality games. Because they slow down the growth of the market and the problem is that unless the market grows we don't have business after two years." (Alpha)

As this indicates there is however more of an effort to have the market grow than to win existing market shares. This is highlighted especially in Finland as the firms do not see much sense in competing against each other as they all try to sell their games internationally. This brings us to the resource side of the competition, where employees are the first scarce resource.

"I think that in Finland within the games industry there is no competition. Like if they do a game then that doesn't harm us in any way. In that sense there are no competitors, only potential collaborators. I think that the only sign of rivalry is that employees may go from firm to firm and that gives you the impression that we are competing now with them. But that is only about employees and not about market areas." (Zeta)

The second scarce resource is capital and the third is competence relating to capital.

"If we think about competition in Finland then it is about funding because there is very little capital moving at the moment. It is a zero sum game. If someone gets the money ten no-one else gets anything." (Gamma)

This means that so called "smart money" is not available that would entail both a monetary investment and also an investment in competence in the form of skilled board members.

Interviewer: What keeps you from getting to your dream situation?

Interviewee: Funding and the understanding of the business. There are no people in Finland that would understand about marketing games like who would have been launching an international game project. There is a lack of capital and lack of marketing and advertising competence. In terms of content I believe that Finland would have a lot to offer because things are done smart and efficiently here. I believe that games can be done with less money here than in many other countries. Compared to Silicon Valley the cost level here is about one fourth and half compared to London." (Gamma)

This would suggest that the selection environment is quite complex and that the barrier to success is not just someone else getting ahead. The institutional setting of the industry affects to a large extent on who will make it and whether anyone will. In that sense future of the industry in Finland can be affected by many actors and is not solely determined by the efforts of the firms.

IV. CONCLUSIONS

The main conclusion is that within such a scattered field competition can not be seen merely as a race over market shares, but as a complex process where simply being efficient in producing high quality products is not sufficient. Within the games industry success comes from originality, but that is a double-ended sword. Your game has to be different from others in the market in order to succeed, but it should not be too different since that will make it impossible to get a publishing deal. As it is a hit-driven business with high risk associated to high potential payoff, there is fierce competition over investments. Also, skilled employees are extremely valuable for the firm. Thus, the resource side of the business also enforces selection pressure over the firms.

Basically efficiency is understood as producing the same output with less input. However, within the games industry succeeding in competition is not about making the same stuff cheaper, but about making new, different and better

stuff with reasonable cost. The development costs of especially console games have been rising exponentially in recent years and this would imply that efficiency in terms of low development cost is not a key success factor. This brings us to the notion of increasing returns that dominate within the games industry. The cost of the development of a game title is constant as the number of physical game copies rises. Even though there are costs associated with producing the discs, cases and printed materials, as well as retail costs, the next sold game copy will reap more profit than the one before. Thus, the more copies you sell the more profit you will make per game copy.

Efficiency is easily defined in industries that produce bulk products such as electricity, concrete or potatoes. Even though they may entail other attributes besides price, e.g. some varieties of potatoes are better than others and better suited for certain purposes, the measurement of efficiency is pretty straightforward as the unit cost usually provides basis for comparison. As a contrast, within the games industry such price per unit efficiency loses its meaning. Even though console games tend to sell for a certain price as do also mobile phone games, the price per game copy is not a relevant measure. The consumer is interested in the amount and quality of entertainment the game will bring. These are very hard to measure and to make things worse, these vary consumer to consumer. Different people appreciate different attributes, such as fun, excitement, easiness, graphics artistry, etc. Thus, "price per unit of fun" (or whichever attribute the consumer in question appreciates) would be the correct measure of efficiency.

The market share thinking is problematic as there is no constant market size that would be shared by the games published during a given year. A big hit can increase the size of the market both temporarily and permanently. The temporal increase will follow from a substantial share of that year's sales coming from this one game. The permanent increase will follow from the power of a hit game in attracting new consumers to buy the first game of their life and more importantly investing in the hardware necessary for playing. This also means that if such hit would not have come to the market then consumers would not have necessarily bought some other game as a substitute. For example, parents often buy a console game for their child as a Christmas present. If there is no game that the child would like over the others then perhaps he/she will ask for a new mobile phone instead. Thus, games are not perfect substitutes, actually far from it. And the size of the market, which is by no means constant even in the short run, is determined by the supply and its consumer appeal.

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